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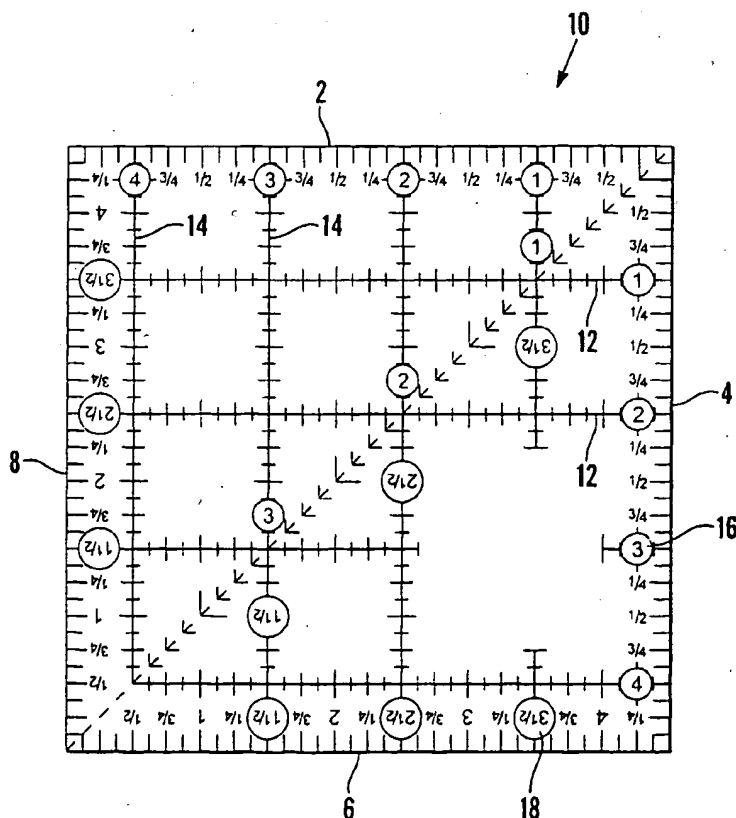
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(54) Title: IMPROVED QUILTING RULER



(57) Abstract: A quilting ruler (10) is square or rectangular in shape and has first, second, third and fourth edges (2, 4, 6, 8), with a first set of equally spaced rulings running (12) parallel to the first and third edges (2, 6) of the ruler and at right angles to a second set of equally spaced rulings (14) running parallel to the second and fourth edges (4, 8) of the ruler. The first line of the first set of rulings is spaced from the first edge (2) of the ruler by a different interval from the interval by which the last line of that set of rulings is spaced from the third edge (6) of the ruler, and the distance of each line of the first set of rulings from the first edge and of each line of the second set of rulings from the second edge is marked so as to be visible when the first and second edges of the ruler are in use and the distance of each line of the first set of rulings from the third edge and of each line of the second set of rulings from the fourth edge is marked so as to be visible when the third and fourth edges of the ruler are in use.



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Improved Quilting Ruler

The present invention relates to an improved ruler, in particular to an improved quilting ruler.

It is known to provide rulers for use in quilting, which rulers are provided with a series of markings to enable the quilter to measure and cut the fabric to be used in the production of the quilt according to specific predetermined measurements in order to follow a pattern. Because of the fact that a large number of pieces of fabric are required for each article, it is necessary for the ruler to be clear and easy to use.

The patterns used for the production of quilts are produced almost exclusively in the United States and are therefore described in Imperial units and, although the improved rulers of the present invention are not limited to Imperial units, the improved rulers of the present invention are particularly suitable for use with such units.

Known quilting rulers for use with Imperial units are generally square or rectangular in form and are generally delimited in intervals of 1" (2.54cm) since this is the closest spacing of rulings which can be clearly and conveniently used by a quilter. Additional supplementary markings are provided at, generally quarter-inch intervals. In order for the quilter to obtain patterns of sufficient complexity, it is necessary for the quilter to be able to cut pieces of fabric at half-inch measurements, so that it is necessary for the quilter to use these additional supplementary markings when measuring and cutting fabric. This increases the time taken to cut the fabric and increases the chances of error, since the additional supplementary markings are not so clear as the main markings.

Quilting rulers are known which are square or rectangular in shape. In use, the quilter arranges the ruler on the fabric to be measured and cut so that the desired design or piece of fabric is correctly positioned, and then measures to the desired size and cuts along the edge of the ruler. If it is desired to cut a piece of fabric measuring, for example 2 inches by 2½

inches, then the quilter will need to use the additional supplementary markings in order to make the second measurement.

It is an object of the present invention to provide an improved quilting ruler in which the above disadvantages are reduced or substantially obviated.

5 The present invention provides a quilting ruler which is square or rectangular in shape and has first, second, third and fourth edges, with a first set of equally spaced rulings running parallel to the first and third edges of the ruler and at right angles to a second set of equally spaced rulings running parallel to the second and fourth edges of the ruler, characterised in that the first line of the first set of rulings is spaced from the first edge of the ruler by a
10 different interval from the interval by which the last line of that set of rulings is spaced from the third edge of the ruler, and the distance of each line of the first set of rulings from the first edge and of each line of the second set of rulings from the second edge is marked so as to be visible when the first and second edges of the ruler are in use and the distance of each line of the first set of rulings from the third edge and of each line of the second set of rulings from
15 the fourth edge is marked so as to be visible when the third and fourth edges of the ruler are in use.

In a preferred embodiment of the ruler according to the invention, the first line of the first set of rulings is spaced at an interval of one inch from the first edge of the ruler and successive lines in the first set of rulings are spaced each at one inch from the previous line and the last
20 line in the first set of rulings is spaced at an interval of one half inch from the third edge of the ruler.

In a further preferred embodiment of a quilting ruler according to the invention, the first line of the second set of rulings is spaced from the second edge of the ruler by a different interval from the interval by which the last line of that set of rulings is spaced from the fourth edge
25 of the ruler.

In a particularly preferred embodiment of the ruler according to the invention, the first line of the second set of rulings is spaced at an interval of one inch from the second edge of the ruler and successive lines in the second set of rulings are spaced each at one inch from the previous line and the last ruling in the second set of rulings is spaced at an interval of one
5 half inch from the fourth edge of the ruler.

The distance of each line of the first set of rulings from the first edge and of each line of the second set of rulings from the second edge is preferably marked by printing a reference numeral on the surface of the ruler, specifying the distance of that line from the edge of the ruler so as to be visible when the first and second edges of the ruler are in use, generally
10 when the first and second edges of the ruler are located as the right hand and the upper edges of the ruler and the distance of each ruling of the first set of rulings from the third edge and of each ruling of the second set of rulings from the fourth edge is marked so as to be visible when the third and fourth edges of the ruler are in use, generally when the third and fourth edges of the ruler are located as the right hand and the upper edges of the ruler.

15 The set of reference numbers specifying the distances from the first and second edges are preferably printed inverted by 180 degrees relative to the reference numbers specifying the distances from the third and fourth edges. The reference numbers may be printed in known manner in a combination of colours in order to enhance visibility on differently coloured fabrics.

20 The rulers according to the present invention may be made from any suitable material, in particular a suitable transparent material. It is particularly preferred that the rulers according to the invention are manufactured from acrylic, which may be extruded or, more preferably, cast. The rulers may be provided in known manner with a non-slip surface on their reverse or fabric contacting face.

25 Three embodiments of quilting rulers will now be described with reference to the accompanying drawings in which

Figure 1 shows an embodiment of a square quilting ruler;

Figure 2 shows the ruler of Figure 1 rotated through 180 degrees;

Figure 3 shows a first embodiment of a rectangular quilting ruler and

Figure 4 shows an alternative embodiment of a rectangular quilting ruler.

5 As can be seen from Figures 1 and 2, a square quilting ruler shown generally at 10 comprises a square of clear acrylic material with edges 2,4,6 and 8. A first set of rulings 12 and a second set of rulings 14 are printed on the ruler, parallel to the edges 2 and 6 of the ruler and 4 and 8 respectively. The first set of rulings 12 are spaced at one inch intervals from edge 2 and at one half inch, one and one half inches and so on from the edge 6 of the ruler. The
10 second set of rulings 14 are spaced at one inch intervals from edge 4 and at one half inch, one and one half inches and so on from the edge 8 of the ruler.

Sets of reference numbers 16 and 18 indicate the distance of each line from the right hand or upper reference edge. When the ruler is positioned as shown in Figure 1 the user can read the first set of reference numbers 16 which are relevant to that orientation of the ruler, and
15 as can be seen from Figure 2 rotation of the ruler through 180 degrees allows the user to read the second set of reference numbers 18 which are relevant to that orientation of the ruler.

The ruler 10 is further provided with non-slip markings (not shown) on the reverse face thereof.

As can be seen from Figure 3, a rectangular quilting ruler shown generally at 20 comprises a square of clear acrylic material with edges 22,24,26 and 28. A first set of rulings 30 and a second set of rulings 32 are printed on the ruler, parallel to the edges 22 and 26 and 24 and 28 respectively of the ruler. The first set of rulings 30 are spaced at one inch intervals from edge 22 and at one half inch, one and one half inches and so on from the edge 26 of the ruler. The second set of rulings 32 are spaced at one inch intervals from edge 24 and from the edge
25 28 of the ruler.

As can be seen from Figure 4, an alternative embodiment of a rectangular quilting ruler shown generally at 40 comprises a square of clear acrylic material with edges 42, 44, 46 and 48. A first set of rulings 50 and a second set of rulings 52 are printed on the ruler, parallel to the edges 42 and 46 and 44 and 48 respectively of the ruler. The first set of rulings 50 are spaced at one inch intervals from edge 42 and at one half inch, one and one half inches and so on from the edge 46 of the ruler. The second set of rulings 52 are spaced at one inch intervals from edge 44 and at one half inch, one and one half inches and so on from the edge 48 of the ruler.

Sets of reference numbers 34 and 36 and 54 and 56 indicate the distance of each line from the right hand or upper reference edge. When the ruler is positioned as shown in Figure 3 or 4 the user can read the first set of reference numbers 34 or 54 which are relevant to that orientation of the ruler, and as with the ruler of Figure 1, rotation of the ruler through 180 degrees allows the user to read the second set of reference numbers 36 or 56 which are relevant to that orientation of the ruler.

The ruler 20 or 40 is further provided with non-slip markings (not shown) on the reverse face thereof.

Claims

1. A quilting ruler which is square or rectangular in shape and has first, second, third and fourth edges, with a first set of equally spaced rulings running parallel to the first and third edges of the ruler and at right angles to a second set of equally spaced
5 rulings running parallel to the second and fourth edges of the ruler, characterised in that the first line of the first set of rulings is spaced from the first edge of the ruler by a different interval from the interval by which the last line of that set of rulings is spaced from the third edge of the ruler, and the distance of each line of the first set of rulings from the first edge and of each line of the second set of rulings from the
10 second edge is marked so as to be visible when the first and second edges of the ruler are in use and the distance of each line of the first set of rulings from the third edge and of each line of the second set of rulings from the fourth edge is marked so as to be visible when the third and fourth edges of the ruler are in use.
2. A quilting ruler according to claim 1 characterised in that the first line of the first set
15 of rulings is spaced at an interval of one inch from the first edge of the ruler and successive lines in the first set of rulings are spaced each at one inch from the previous line and the last line in the first set of rulings is spaced at an interval of one half inch from the third edge of the ruler.
3. A quilting ruler according to claim 1 or claim 2 characterised in that the first line of
20 the second set of rulings is spaced from the second edge of the ruler by a different interval from the interval by which the last line of that set of rulings is spaced from the fourth edge of the ruler.
4. A quilting ruler according to any of claims 1 to 3 characterised in that the first line
25 of the second set of rulings is spaced at an interval of one inch from the second edge of the ruler and successive lines in the second set of rulings are spaced each at one inch from the previous line and the last ruling in the second set of rulings is spaced

at an interval of one half inch from the fourth edge of the ruler.

5. A quilting ruler according to any of claims 1 to 4 characterised in that the distance of each line of the first set of rulings from the first edge and of each line of the second set of rulings from the second edge is marked by printing a reference numeral on the surface of the ruler, specifying the distance of that line from the edge of the ruler so as to be visible when the first and second edges of the ruler are in use and the distance of each ruling of the first set of rulings from the third edge and of each ruling of the second set of rulings from the fourth edge is marked so as to be visible when the third and fourth edges of the ruler are in use.
- 10 6. A quilting ruler according to claim 5 characterised in that the set of reference numbers specifying the distances from the first and second edges are printed inverted by 180 degrees relative to the reference numbers specifying the distances from the third and fourth edges.
- 15 7. A quilting ruler according to claim 6 characterised in that the reference numbers are printed in manner in a combination of colours in order to enhance visibility on differently coloured fabrics.
8. A quilting ruler according to any of claims 1 to 7 characterised in that it is made from a transparent material.
9. A quilting ruler according to claim 8 characterised in that it is made from cast or
20 extruded acrylic.
10. A quilting ruler according to any of claims 1 to 9 characterised in that it is provided with a non-slip surface on its reverse or fabric contacting face.
11. A quilting ruler substantially as herein described and with reference to the accompanying drawings.

1/4

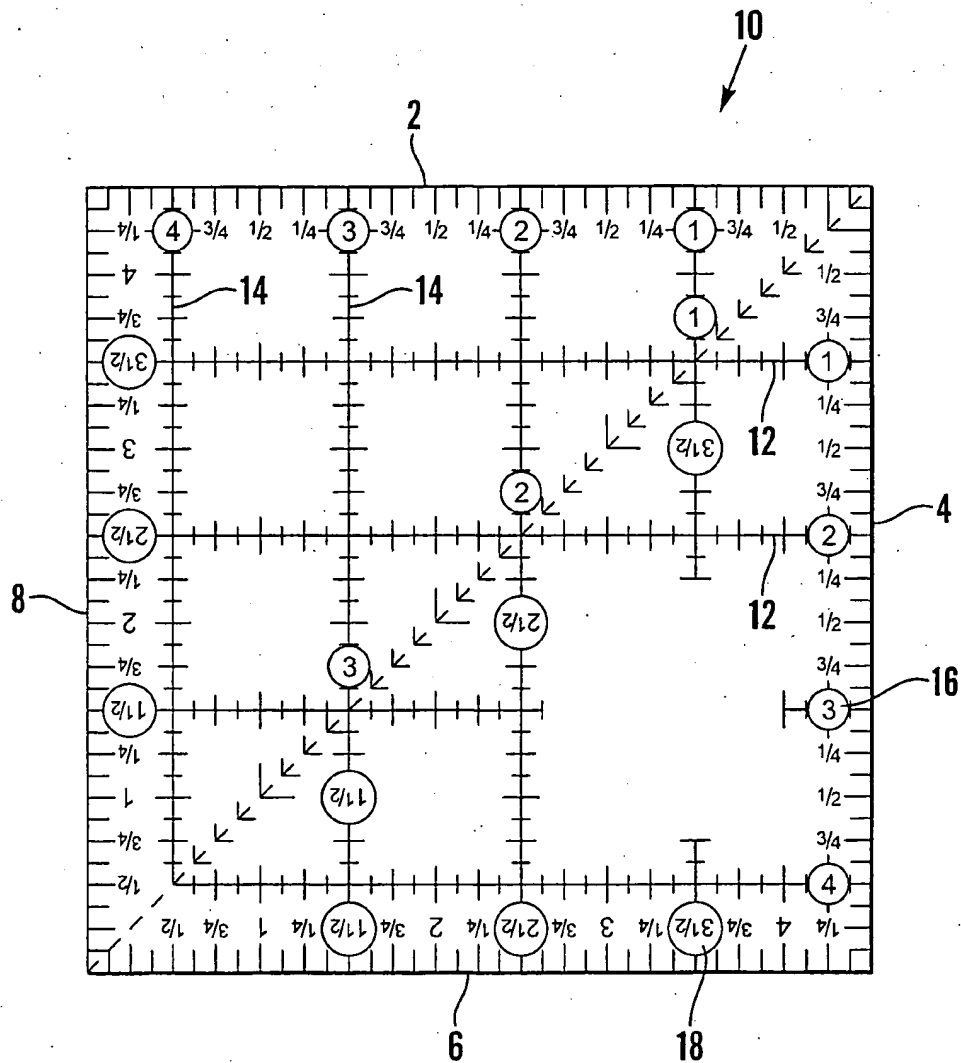


Fig. 1

2/4

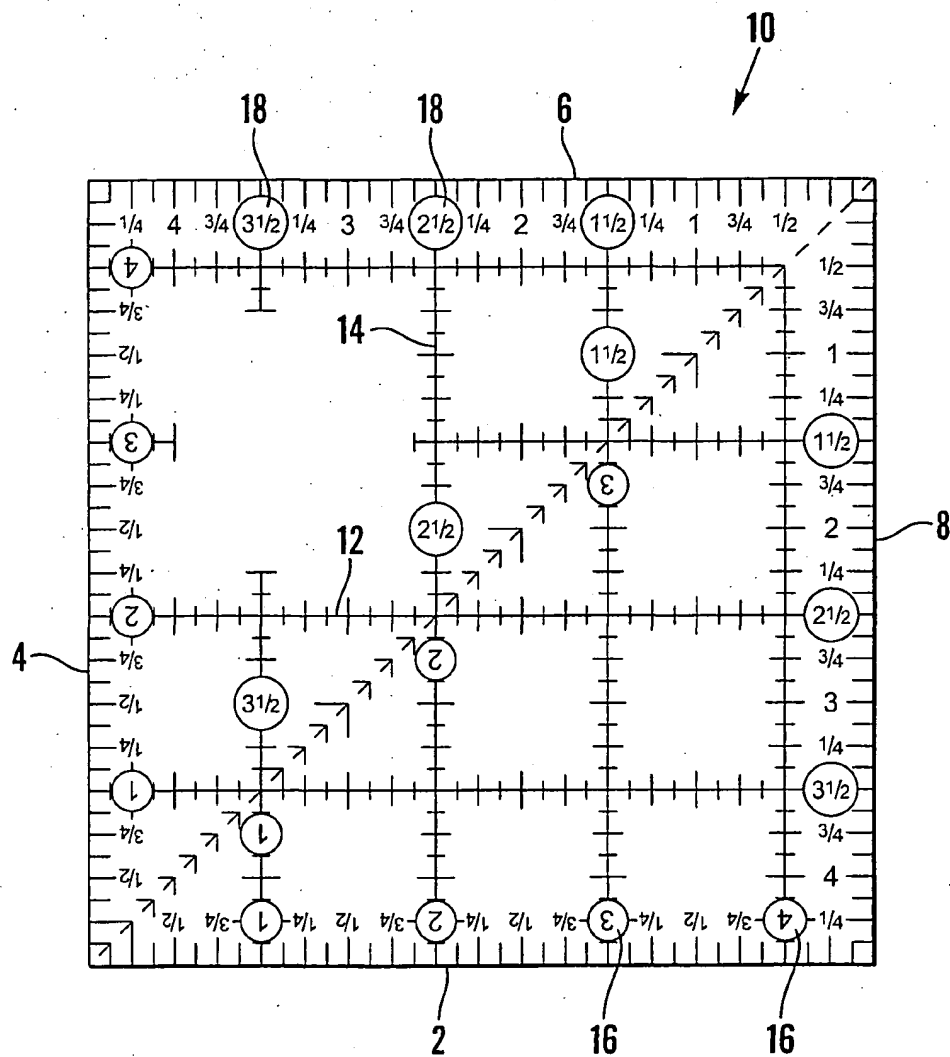


Fig.2

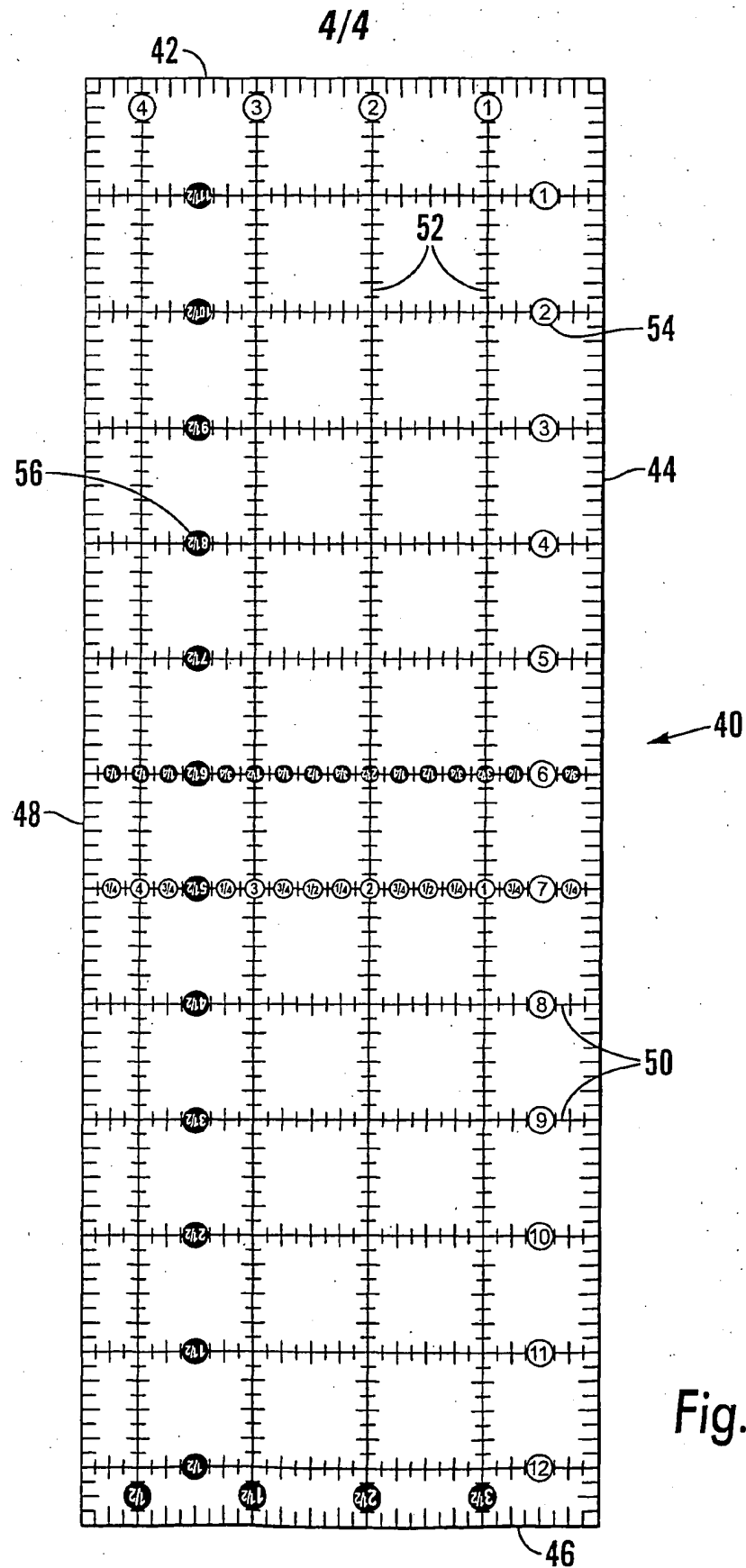


Fig.4

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 D05B97/12 D05B35/12 G01B3/00 B26B29/06

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Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 754 282 A (MARTA MEISSNER-BUB) 8 August 1956 (1956-08-08) the whole document	1-5
A	US 4 779 346 A (R.D. SCHAFER) 25 October 1988 (1988-10-25) the whole document	1,6-9
A	US 5 791 062 A (J.S. WALKER) 11 August 1998 (1998-08-11)	
A	PATENT ABSTRACTS OF JAPAN vol. 005, no. 026 (P-049), 17 February 1981 (1981-02-17) & JP 55 152401 A (MIYASAKA TETSUO), 27 November 1980 (1980-11-27) abstract	

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 829 150 A (M.B. MCELIGOT) 3 November 1998 (1998-11-03) -----	
P,A	US 6 276 070 B1 (J. HAWLEY) 21 August 2001 (2001-08-21) figure 3 -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

PCT/GB 01/04259

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 754282	A	08-08-1956	NONE
US 4779346	A	25-10-1988	NONE
US 5791062	A	11-08-1998	CA 2202805 A1 17-10-1997
JP 55152401	A	27-11-1980	NONE
US 5829150	A	03-11-1998	NONE
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